

I Can See Me: Webcams in the Classroom

Educators have been using the power of video to capture students' attention, engage them in learning, and enhance curriculum for years. With the advent of inexpensive webcams and digital technology, video is easier than ever to incorporate into daily classroom use. K–12 students can independently use webcams in the areas of reading, social skills, and reflection. We have found that even primary grade level students can record, view, and take advantage of what we call the “I can see me” principle.

Reflect and Refine

One of our students, a third grader we'll call Sam, struggled with reading throughout his school career. He often avoided reading tasks and particularly disliked reading out loud. After trying a number of different tactics to help Sam, we offered to let him try reading aloud in front of our new webcam.

Sam didn't have any experience with the technology but quickly learned how to use the webcam. As the picture came up on the screen, Sam got a big grin on his face, turned around to face the other students, and excitedly shouted, “Hey, I can see me!”

Using a webcam in this way turns the computer screen into a live recordable video monitor. It “reflects” back to students their own image and can record both video and audio. The recording allows students to see their own error patterns, fix the errors, and then see the new and improved performance over time. Students readily engage in these activities, and seeing themselves on the screen provides ongoing motivation to improve performance on the targeted skills.

How It Works

First, the student records himself reading a text and then reviews the

video independently. This helps him build skills in self-correction and self-monitoring. Next, the teacher reviews the video with the student and provides guidance and suggestions regarding both reading (praise for reading correctly and finding errors) and self-correction (guiding the student in finding errors in areas he did not identify). In the final phase, the student repeats the recording and reviewing. The reread/record/review phase is often where students really experience the “I can see me” principle. They take pride in their improvement and often have a near perfect reading sample. They can see themselves as successful and improving readers.

Over time, students improve their reading fluency. They increase the number of words per minute and decrease the number of errors. In particular, students seem to improve their ability to correct when they read and identify error patterns. Students successfully generalize the skills to textbook and content-area reading. However, the teacher must continue to work with students to further develop these skills.

In Sam's case, using the “I can see me” procedure over the course of a semester helped him improve his oral reading fluency, increase his average correct words per minute from 81 to 105, and reduce the number of reading errors from more than five to less than two. Sam continued to use the webcam at his discretion during the following semester. “I think it helped me be a better reader because I got to see myself read and see my mistakes,” he wrote in response to a follow-up study.

We have used a similar procedure to work on other performance-based skills, such as listening comprehension (repeating a series of prerecorded

“I Can See Me” Procedure

1. The teacher selects an appropriate text and makes two copies for each student. The two copies will be stapled together.
2. Using a webcam, the student records a video of herself reading the text.
3. While watching her videos, the student highlights any errors she made while reading the passage. She rates herself in the areas of rate, volume, and accuracy.
4. The student discusses the video with the teacher. The conference should last about three to seven minutes.
5. The student rereads the passage on another video.
6. The student watches the second video, highlighting her mistakes.
7. The student completes a reflection sheet that asks her to again rate herself on the rate, volume, and accuracy. In addition, the student evaluates whether her reading improved during the second recording, explaining any differences and reflecting on any changes.

Guidelines for Conferencing with Student

1. Ask the student what he noticed while he was reading.
2. Watch the video with the student and point out any mistakes that he did not highlight.
3. Review errors with the student. Make comments on the reflection sheet.
4. Make suggestions for improving reading.

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The Basics

Today's webcams are inexpensive and easy to install. We use the Logitech Quickcam Pro 9000, which costs about \$80. Most webcams use a USB interface and have plug-and-play capability. Others require the installation of driver software that comes on a CD with the camera.

A helpful addition is a headset microphone/earphone combination. This improves the quality of students' recordings and helps filter out background noise from the classroom. Our students, particularly those at the secondary level, prefer smaller and less intrusive mics and ear buds instead of traditional headphones.

Recording and storing video are the two key procedures required for our classroom applications. We recommend using the video-editing software available on the platform of your choice (iMovie for Mac or Windows Movie Maker for Windows). Programs such as PhotoBooth for Mac and the software that comes with your webcam will also work and have very similar control functions.

Most programs store the captured videos in separate folders on your computer (My Videos for Windows). Keep in mind that lengthy video files can fill up hard drive space quickly. Changing the quality settings on the video can help reduce file sizes, and we recommend using a separate hard drive to save and store student videos.

verbal directions into a microphone); oral language, including basic social interactions (introducing yourself, answering small talk questions, telling a story); and spelling (listening to a recording of words and then spelling them aloud into the microphone). In each case, the chance to self-correct by seeing themselves on the computer provides an engaging and powerful learning experience for our students.

Communicate and Share

Webcams also allow students the opportunity to participate in communities and share their ideas and work. Students can upload their videos on websites, post them to social networks, e-mail them, or save them on DVDs and flash drives.

Last year, Gina, one of our fifth grade students, used the webcam to record her ideas and thoughts for an upcoming meeting to discuss her individualized education program (IEP). She detailed her strengths and weaknesses, reflected on her learning over the past year, and shared her ideas for what she wanted to work on. The video was then played at the IEP meeting. This was a substantial accomplishment, because Gina was a student with selective mutism. She rarely spoke in class to teachers or

paraprofessionals, and when she did, it was only in a whisper. Given the webcam, microphone, and an isolated study carrel, Gina opened up, sharing her thoughts like never before. She recorded and rerecorded each idea until it was just the way she wanted it to be.

Another student used the webcam to record a video message each month for his father who was deployed overseas. He would record a brief message, then share examples of his work, holding them up to the camera and describing them for the video.

What's Ahead

Webcams and the "I can see me" principle can enhance our instruction and add a new effective technique for teachers. The ability to easily capture, store, and share digital video will lead to many exciting educational opportunities for our students and teachers. Facilitating communication, adapting instruction, and providing opportunities to practice self-correction on performance skills are just a few uses for webcams.

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